

Maryland Department of Budget & Management

Office of the Secretary

PARRIS N. GLENDENING
Governor

FREDERICK W. PUDDISTER
Secretary

T. ELOISE FOSTER
Deputy Secretary

DBM PROCUREMENT DIRECTIVE

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Subject:	Guidelines for Information Technology (IT) Procurement Century Compliance
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A. Purpose

To ensure that State agencies procure Information Technology (IT) products that are century compliant; to define IT technical terms, including “century compliant;” to establish applicability and guidelines governing the procurement of century compliant IT products; to provide an example of a century compliance warranty in IT contracts and to provide an example of a letter that may be sent to third-party software vendors in order to determine century compliance for agency unique software.

B. Definitions

Century Compliance: For the purpose of these guidelines, “century compliance” means that IT systems or applications meet the following criteria and/or perform as described:

1. Calculations and program logic accommodate both same century and multi-century formulas and data values. Calculation and logic include (but are not limited to) sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values when used either in a stand-alone configuration or in combination with other century compliant products used by the State.
2. Interfaces (to and from other systems or organizations) prevent non-compliant dates and data from entering any State system.

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3. User interfaces (i.e., screens; reports; etc.) accommodate both same century and multi-century dates.
4. The year 2000 is correctly treated as a leap year within all calculations and calendar logic.

Event Horizon: An IT “event horizon” is the latest future date that will be processed or handled by the IT system or application. For example, if an application calculates expiration dates 2 years into the future, its “event horizon” is always a date 2 years from the present date.

Information Technology (IT): For purposes of these guidelines IT shall be defined as all automated information processing equipment and instructions, to include:

1. Computer hardware and computerized devices
2. Computer “firmware” (microcode)
3. Computer applications, including, (but not limited) to:
 - a. Purchased applications software
 - b. Purchased commercial off the shelf (COTS) software development packages (word processing, spreadsheets, project management, database managers, editors, compilers, etc.)
 - c. Custom developed application software
4. Computer system software, including (but not limited to) operating systems, database management systems and Job Control Language (JCL)

5. Data:
 - a. Database Management Systems (DBMS) structures (database definitions) and databases
 - b. Stored data
 - c. Incoming data (received from other applications or organizations)
 - d. Outgoing data (being sent to other applications or organizations)
6. Archives and backup

Year 2000 Event Horizon: For the purpose of these guidelines, the “year 2000 event horizon” is the date by which an IT system or application must be compliant before its date processing logic fails. Based on the event horizon example above the “year 2000 event horizon” would require the application to be compliant - and tested - 2 years **before** January 1, 2000, or no later than January 1, 1998.

C. Applicability

For IT systems or applications purchased or acquired from an outside source after March 21, 1997, these guidelines apply to:

1. IT products acquired, purchased or licensed for use by State government entities.
2. Vendor provided product modifications or upgrades for IT products (that were originally purchased or licensed from the vendor that is providing the modifications or upgrades).
3. All vendor IT maintenance agreements for future product upgrades.
4. IT services, including custom software development or modifications, and all outsourced IT services (i.e., computer operations or other IT services).

For IT systems or applications created by, or for, the State of Maryland, after March 21, 1997, these guidelines apply to:

1. IT systems or applications created by State agencies and their representatives (i.e., employees, contractual employees, etc.) including services and maintenance to

support these products.

D. Policies/Procedures

These guidelines apply to IT procurements of intelligent computer hardware (including associated peripherals), firmware (microcode), software (applications and systems) and services to develop customized IT applications as follows:

1. When IT products have date data applications or components, agencies may procure only those products that are warranted as century compliant unless DBM's Office of Information Technology grants a waiver from this requirement.
2. Each solicitation for IT products having date data components or applications shall contain a clause requiring the products offered to be century compliant. The resultant contract must also contain a clause that warrants century compliance. Compliance, including implementation, must be achieved prior to the IT system or application's "year 2000 event horizon." A sample clause is contained in Attachment 1 to these guidelines.
3. Agencies should review existing purchase orders, maintenance service contracts and contracts for IT products having date data components or applications to ensure that the existing products and services (or products and services on order) are century compliant prior to the IT system or application's "year 2000 event horizon." Where date data components or applications are required but no warranty has been provided, agencies shall attempt to obtain a century compliant warranty for products furnished or to be furnished. In determining whether to modify an existing contract to achieve century compliance, the agency should consider:
 - a. Whether century compliance is feasible;
 - b. The cost of compliance as compared to the potential cost of implementing future corrective measures; and
 - c. Whether the contractor will agree to the modification.

A sample letter that may be sent to third-party software vendors in order to determine century compliance is contained in Attachment 2 to these guidelines.

Caution: This letter (or an equivalent letter, as appropriate) should be sent only to those third-party software vendors that are supplying agency unique software or niche software not used by the majority of State agencies. For example, it would be inappropriate to send the letter to Microsoft for its Office products as this mainstream software package is used

by many State agencies. (Century compliance issues for mainstream software packages are being addressed at the State level).

4. Each Board of Public Works (BPW) Action Agenda item for an IT procurement must state one of the following:

a. The contractor warrants these IT products/services as century compliant;
or

b. The Office of Information Technology, Department of Budget and Management, has waived the requirement for a century compliance warranty due to _____; or

c. These IT products/services have no date data components or applications, century compliance is not applicable to this procurement.

Attachment 1

Century Compliance Warranty

Each contract for information technology (IT) products having date data applications or components must contain a clause that warrants century compliance. The following clause is recommended. Agencies may modify the clause or use an equivalent clause as appropriate.

The contractor warrants that the products provided or systems developed under this contract are century compliant. "Century compliant" means that the product:

1. Is able to process date data accurately - including date data century recognition, calculations that accommodate same century and multi-century formulas and date values (including leap year factors), and date data interface values that reflect the century - when used either in a stand-alone configuration or in combination with other century compliant products used by the State.
2. Will not abnormally terminate its function or provide or cause invalid or incorrect results due to incompatibility with the calendar year.

In addition to any other warranties applicable to this contract or any remedies otherwise available to the State, the contractor agrees to promptly repair or replace any product furnished under this contract that is not century compliant, provided the State gives notice within a reasonable time following discovery of such failure.

Attachment 2

Century Compliance Vendor Letter

The following is an example of a letter that may be sent to third-party software vendors in order to determine century compliance.

Caution: This letter (or an equivalent letter, as appropriate) should be sent only to those third-party software vendors that are supplying agency unique software or niche software not used by the majority of State agencies. For example, it would be inappropriate to send the letter to Microsoft for its Office products as this mainstream software package is used by many State agencies. (Century compliance issues for mainstream software packages are being addressed at the State level).

Dear Sir/Madame:

I am contacting you on behalf of (*client name and address*), for information regarding your (*product, product name, license number (or license serial number) and release number for platform*), which (*client name purchased-or-leased on-in date*), and which is covered under the terms of (*support contract*).

We are currently performing an assessment for (*client name*) of the state of its Information Technology systems, related to the upcoming change of century to occur on January 1, 2000. We are aware that it is very common for software systems to have errors of varying degrees related to the processing of dates. For example, software may fail without completing its functions (“abnormal ending”) or may function but produce or cause erroneous output (“invalidity” or “incorrect results”). Because of these potential errors occurring, we are contacting all of our hardware and software vendors to obtain information from them on the status of their products, so that we can use this information in making our own plans for corrective actions.

With regard to (*product name and release*), please provide us with the following information:

1. Does this system have any problems related to the processing of dates? This inquiry is focused on dates on and after January 1, 2000, but is not limited to those dates.
 - a. What are the problems?
 - b. What are their external symptoms?
 - c. When will these failures first occur?
2. What are your plans to address these problems?
 - a. How will the problems be fixed?
 - b. When will the fixes be available?
 - c. In what product release will the fixes be included?
 - d. What changes in interfaces will be required by the fixes, i.e. interface changes which will require corresponding changes in our systems?
 - e. What changes will there be in underlying platform support, i.e., will upgrades be required in our hardware or software platform and environment?
 - f. How will you distribute the fixes?

Please send your response to the address shown above or fax it to (*fax number*). A prompt response will be appreciated.

Sincerely,

Name
phone number